

PATENT ABSTRACTS OF JAPAN

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(54) SECURITY SYSTEM

(57)Abstract:

PROBLEM TO BE SOLVED: To control that a CD-ROM used in game devices having preliminarily no identification information is used in any game device of the devices.

SOLUTION: The game device 11 stores a device ID issued from a server 13 in a non-volatile memory 12 when accessed to the server 13 via communication network. The ID is generated based on the accessed date and hour (for example,

37 sec. 5 min. 9 pm. 10. Dec. 2000) when the game device 11 accesses the server 13 via the communication network. The server 13 conducts registration on a database 14 while correlating a serial number SN of the CD-ROM 10 used in the game device 11 with the device ID of the game device 11. Which CR-ROM 10 is used in any game device 11 is managed thereby.

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CLAIMS

[Claim(s)]

[Claim 1] The security system equipped with a means to publish identification

information of a proper to the data processor linked to a communication network, a means to associate and memorize the identification information of a proper to the record medium which recorded the data which should be processed by this data processor with the identification information and this data processor of a proper, and a means to manage whether which record medium was used with which data processor by referring to this correlation.

[Claim 2] The security system according to claim 1 using the information using the stage or this which the data processor connected to said data processor as identification information of a proper in the communication network.

[Claim 3] The record-medium management method which manages whether which record medium was used with which data processor by publishing identification information of a proper to the data processor linked to a communication network, associating and memorizing the identification information of a proper to the record medium which recorded the data which should be processed by this data processor with the identification information and this data processor of a proper, and referring to this correlation.

[Claim 4] The record-medium [this / which the data processor connected to said data processor as identification information of a proper in the communication network / the stage or this] management method according to claim 3 using *****.

[Claim 5] The record medium which recorded the program which makes a computer system perform a record-medium management method according to claim 3 or 4 and in which computer reading is possible.

[Claim 6] The data processor equipped with a storage means to memorize the 1st identification information of a proper to the data processor published from a server through a communication network, and a transmitting means to transmit at a server the 2nd identification information which is the identification information of a proper, is associated with the 1st identification information of the above, and is used for management of a record medium through a communication network with the 1st identification information to the record medium which recorded data.

[Claim 7] The record medium which recorded the program as which a computer system is operated as a storage means according to claim 6 and a transmitting means and in which computer reading is possible.

[Claim 8] The data processor which is a data processor which carries out data processing of the save data of a backup memory, and was equipped with the means which uses identification information of a proper as a key at this data processor, and carries out encryption processing of the save data.

[Claim 9] The data processor [equipped with the means which uses said identification information as a key and carries out decryption processing of said save data by which encryption processing was carried out] according to claim 8.

[Claim 10] The data-processing approach which uses identification information of a proper as a key and carries out encryption processing of the save data of a backup memory at a data processor.

[Claim 11] The data-processing approach according to claim 10 which uses said identification information as a key and carries out decryption processing of said save data by which encryption processing was carried out.

[Claim 12] The record medium which recorded the program which makes a data processor perform the data-processing approach according to claim 10 or 11 and in which computer reading is possible.

[Claim 13] The data processor equipped with a means to read and memorize the save data memorized by the backup memory, and a means to eliminate the save data memorized by the backup memory after reading termination of these save data.

[Claim 14] The management method of the save data which eliminate the save data memorized by the nonvolatile memory in a backup memory after transmitting the save data by which data processing is carried out with a data processor to a data processor.

[Claim 15] The security system equipped with a means to permit processing of the data in a backup memory when a means to record the count of the above on a backup memory or a data processor, and the data processor equipped with the

backup memory connect with a communication network and it is in agreement with the count by which the count of the above acquired from the data processor is registered into the database, while registering into the database the count which the data processor equipped with the backup memory connected to the communication network.

[Claim 16] The security system according to claim 15 using the information using the stage or this which the data processor which equipped said backup memory with the backup memory as identification information of a proper connected to the communication network.

[Claim 17] The management method of the save data which permit processing of the data in a backup memory when the data processor which recorded the count of the above on the backup memory or the data processor, and was equipped with the backup memory connects with a communication network and it is in agreement with the count by which the count of the above acquired from the data processor is registered into the database, while registering into the database the count which the data processor equipped with the backup memory connected to the communication network.

[Claim 18] The backup memory management method according to claim 17 using the information using the stage or this which the data processor which equipped said backup memory with the backup memory as identification information of a proper connected to the communication network.

[Claim 19] The record medium which recorded the program which makes a computer system perform a backup memory management method according to claim 17 or 18 and in which computer reading is possible.

[Claim 20] The game server which permits participation of a communication link game to the player which sets up beforehand the level which can participate in a communication link game corresponding to the difficulty of a game, and fills the demand level corresponding to the difficulty of a game.

[Claim 21] The game art which does not save the advance situation of a game as save data when connecting with a communication network and performing a

communication link game.

[Claim 22] The record medium which recorded the program which makes game equipment perform a game art according to claim 21 and in which computer reading is possible.

[Claim 23] The game art which shortens display time of the ending screen of a game when connecting with a communication network and performing a communication link game.

[Claim 24] The record medium which recorded the program which makes game equipment perform a game art according to claim 23 and in which computer reading is possible.

DETAILED DESCRIPTION

[Detailed Description of the Invention]

[0001]

[Field of the Invention] This invention relates to the amelioration technique of the communication link game performed by two or more game equipments connecting with a network.

[0002]

[Description of the Prior Art] Two or more game equipments connect with communication link TTOWAKU, such as the telephone line and an ISDN network, and performing a communication link game is proposed. In this communication link game, these people proposed the security technique of a record medium in JP,2000-35885,A so that they may prevent the unauthorized use by the third person of the record medium which recorded game software.

[0003] A technique given in this official report is that a server carries out unitary management of the identification information of a proper to the identification information and game equipment of a proper at the record medium which

recorded game software, and which game equipment grasps which record medium was used. When a server judges that the record medium with which the game equipment was equipped is used for other game equipments before when game equipment connects with communication link TTOWAKU, a limit is prepared in game processing. When a server judges that it is used only for the game equipment concerned, the usual game processing is performed.

[0004]

[Problem(s) to be Solved by the Invention] However, in order not to necessarily put the identification information of a proper into game equipment beforehand in the phase of development of game equipment, game equipment without such identification information also exists.

[0005] Moreover, it is carrying out shunting preservation of the data, such as various items which the advance situation and player of a game gained in the communication link game to the backup memory constituted possible

[desorption] by the body of game equipment, or the controller for actuation.

Although the game play was able to be again performed from the condition in front of game termination Since a third person was provided with the save data (for example, item etc.) of self by copying the contents of the backup memory, the third person concerned was able to enjoy the game using others' save data. Thus, if the contents of the backup memory are copied easily, the fault that a player cannot taste the fun of a game will arise.

[0006] Such a problem is produced, also when it constitutes so that others' body of game equipment or controller for actuation may be equipped with the backup memory constituted possible [desorption] by the body of game equipment, or the controller for actuation and a game play can be performed.

[0007] Moreover, although the save data by which shunting preservation was carried out can be transmitted to a backup memory from game equipment through a communication network at other game equipments, in case save data are transmitted to game equipment from a backup memory, when it leaves save data in the backup memory, there is a possibility that unauthorized use that

others can be provided with save data may be made leaving save data to the backup memory of self [sampling a backup memory compulsorily from game equipment].

[0008] Moreover, since a limit was not prepared in the level which can participate in a game in the conventional communication link game, when a beginner and an upper person participated in a communication link game, even if the beginner did nothing, he will arrive even at the ending of a game by attaching the upper person back and going, and had brought a result which the fun of a game reduces by half.

[0009] If similarly shunting preservation of the save data about the advance situation of a game is carried out when it is the communication link game in which two or more play persons participate, a beginner will advance a game from the middle of an upper person's game by participating in a game with an upper person. If the save data about the advance situation of a game are saved at a beginner's backup memory, since a next game is left with it becoming [starting from this middle and / to play a part of game] impossible, it is not desirable.

[0010] Moreover, since a telephone rate is charged as connection charge and the charge of an Internet connectivity to a provider is also further charged, as long as it has connected with the telephone line in the case of a communication link game, if the ending of the game which does not need actuation of a play person requires long duration beyond the need, a player will result in having forced an excessive economic burden in spite of having not carried out the game play.

[0011] Then, this invention makes it a technical problem to propose the record medium which recorded the program for performing the security system which prevents the unauthorized use of the record medium by the third person, a data processor, a record-medium management method, and this approach and in which computer reading is possible. Moreover, this invention makes it a technical problem to propose the record medium which recorded the program for performing the management method and this approach of the data processor which prevents the unauthorized use of a backup memory, the data-processing

approach, a security system, and save data and in which computer reading is possible. Moreover, this invention makes it a technical problem to propose the record medium which recorded the program for performing the game server, the game art, and this approach for enjoying a communication link game more pleasantly and in which computer reading is possible.

[0012]

[Means for Solving the Problem] Identification information of a proper is published to the data processor connected to a communication network in this invention in order to solve the above-mentioned technical problem, the identification information of a proper is associated and memorized to the record medium which recorded the data which should be processed by this data processor with the identification information and this data processor of a proper, and it manages whether which record medium was used with which data processor by referring to this correlation. In order that a server may publish identification information of a data processor through a communication network, even if it is a data processor which does not have the identification information of a proper beforehand, it can secure the security of a record medium.

[0013] Moreover, in this invention, the record medium which recorded the program which makes a computer system perform the above-mentioned approach and in which computer reading is possible can be offered. As a record medium in which computer reading is possible, there is internal storage in computers, such as RAM besides a portability record medium and ROM, or external storage like a hard disk like an optical disk (disk with the physical format of proper, such as CD-ROM, DVD-ROM, DVD-RAM, DVD-R, PD disk, MD disk, and an MO disk), or a flexible disk (FD).

[0014] Moreover, in this invention, encryption processing of the save data of a backup memory is carried out at a data processor, using identification information of a proper as a key. Thereby, in other data processors, since the save data in a backup memory cannot be used, they can prevent the unauthorized use of save data.

[0015] Moreover, in this invention, after transmitting the save data by which data processing is carried out with a data processor to a data processor, the save data memorized by the nonvolatile memory in a backup memory are eliminated. Unauthorized use that this transmits to others and a data processor, leaving the save data in a backup memory in this backup memory can be prevented effectively.

[0016] Moreover, while registering into a database the count which the data processor equipped with the backup memory in this invention connected to the communication network, the count of the above is recorded on a backup memory or a data processor, and when the data processor equipped with the backup memory connects with a communication network and it is in agreement with the count by which the count of the above acquired from the data processor is registered into the database, processing of the data in a backup memory is permitted. Thereby, the illegal copy of the save data in a backup memory can be prevented effectively.

[0017] Moreover, in this invention, corresponding to the difficulty of a game, the level which can participate in a communication link game is set up beforehand, and participation of a communication link game is permitted to the player which fills the demand level corresponding to the difficulty of a game. Thereby, a beginners' class person can cancel above un-arranging [of borrowing an upper person's force by participating in a communication link game, and going on a game with an upper person].

[0018] Moreover, in this invention, when connecting with a communication network and performing a communication link game, the advance situation of a game is not saved as save data. Moreover, even if it is the case where game equipment saves the situation of game advance, when performing a game without connecting with a communication network, you may constitute so that it may forbid playing from the middle of a game with reference to this advance situation. Thereby, above un-arranging is cancelable.

[0019] Moreover, in this invention, when connecting with a communication

network and performing a communication link game, display time of the ending screen of a game is shortened. Thereby, increase of the charge of an Internet connectivity to the connection charge and the game server of a communication network can be held down.

[0020]

[Embodiment of the Invention] Gestalt 1. drawing 1 of implementation of invention is an explanatory view of a server and game equipment which prevents the unauthorized use by the third person of a record medium. In this drawing, a sign 10 is the portability record medium which recorded game software, such as CD-ROM, and a sign 11 is home video game equipment. Game equipment 11 reads the game program currently recorded on the record medium 10, and it has desired communication facility and it is constituted so that a communication link game can be performed with other game equipments through communication networks, such as various public lines, such as the telephone line and an ISDN network, or a dedicated line. A server 13 manages communication link game processing of each game equipment linked to communication link TTOWAKU etc.

[0021] The identification information of a proper is given to each record medium called a serial number (SN) to a record medium 10. In the example of this drawing, SN of a record medium is A0101. SN may be recorded on the record medium 10 as data, and may be indicated by a record medium 10, or its receipt case and manual. If game equipment 11 accesses a server 13 through a communication network (this drawing (1)), a server 13 will require the equipment ID of game equipment 11, and a transfer of SN of a record medium 10 of game equipment 11. Equipment ID is the identification information broken and given, as not overlapped to each game equipment, and it is published from a server 13.

[0022] When game equipment 11 accesses a server 13 for the first time, since the server 13 has not yet published Equipment ID to game equipment 11, it publishes Equipment ID to game equipment 11 (this drawing (2)). As equipment ID, the stage when game equipment 11 accessed the server can be used. A part and a second are contained at a stage at A.D. which is time, the moon, a day,

and the time. For example, Equipment ID is set to 2000.12.10.21.05.37 when time with access is 21:05 37 seconds on December 10, 2000. Game equipment 11 memorizes the equipment ID published from the server 13 to the nonvolatile memory 12, such as a flash memory. Moreover, you may memorize to nonvolatile memory 12 by using as Equipment ID the data which enciphered this time.

[0023] SN of the record medium used for game equipment by using Equipment ID as a key at the database 14 is associated, and it is managed per record. A server 13 generates the record which associated the equipments ID (2000.12.10.21.05.37) and SN (A0101) published to game equipment 11 (this drawing (3)).

[0024] Since the server 13 associated the equipment ID of game equipment 11, and SN of a record medium 10 and has managed them unitary by the above-mentioned configuration, if a third person is going to insert and use the record medium used with other game equipments for the game equipment of self, since SN of this record medium and the equipment ID of game equipment are not in agreement, a server 13 can apply a limit to use of this third person's record medium.

[0025] Moreover, if it takes into consideration that there is almost that no two or more persons' player includes to a second unit, and accesses coincidence at a server, game equipment 11 can assign the equipment ID of a proper substantially to each game equipment as equipment ID by using the time which accessed the server 13 to a second unit. Of course, not only the time to which game equipment accessed the server but ID prepared so that it might not overlap beforehand can also be used as equipment ID.

[0026] In addition, although CD-ROM was illustrated as a record medium in the above-mentioned explanation, it is applicable to various optical disks, such as not only this but DVD-ROM, DVD-RAM, DVD-R, PD disk, MD disk, an MO disk, etc., a flexible disk (FD), the desorption type cartridge that memorized the game program, a memory card, etc.

[0027] Gestalt 2. drawing 3 of implementation of invention is the explanatory view of game equipment and the controller for actuation. The controller 20 for actuation constitutes the backup memory 22 for carrying out shunting preservation of the save data free [desorption], and the control unit 21 which has arranged an analog key and various switches further is formed. The backup memory 22 is equipped with nonvolatile memory. The controller 20 for actuation is connected to game equipment 23 through a connecting cord 28 and a connector 29. In addition, a backup memory 22 may be constituted so that it may attach in game equipment 23 free [direct desorption].

[0028] Drawing 2 is the functional block diagram of game equipment and the controller for actuation. Game equipment 23 is equipped with the game processing section 24, the cipher-processing section 25, CD-ROM drive 26, and the equipment ID memory 27, and is constituted. Each of these modules are realized by hardware, such as CPU, ROM, and RAM. The game program supplied to the game processing section 24 from CD-ROM through CD-ROM drive 26 is read, a game is developed based on the control signal of the analog key outputted from a control unit 21, or various switches, and the save data for carrying out shunting preservation are generated to a backup memory 22.

[0029] If directions are given to game equipment 23, or directions are given to game equipment 23 so that a game program may carry out shunting preservation of the save data in process of program manipulation so that a player may carry out shunting preservation of the save data at a backup memory 22, the cipher-processing section 25 performs cipher processing to save data, and will carry out shunting preservation to a backup memory 22 by using as a key proper information on the game equipment 23 memorized by the equipment ID memory 27 (for example, serial number). Cipher processing can use well-known cipher processing. On the other hand, when game equipment 23 reads the save data memorized by the backup memory 22, in the cipher-processing section 25, by using Equipment ID as a key, decode processing is carried out and save data are outputted to the game processing section 24.

[0030] By using proper information on game equipment 23 as a key, since encryption processing is carried out by the above-mentioned configuration, by it, the data saved to a backup memory 22 cannot be used with other game equipments. Therefore, the unauthorized use of a backup memory, such as carrying out a game play with the game equipment of self using others' backup memory, can be prevented effectively.

[0031] Gestalt 3. drawing 4 of implementation of invention is an explanatory view when two or more game equipments connecting with communication link TTOWAKU, and performing a game play. In this drawing, signs 32 and 34 are home video game equipment, and 35 is a server which controls a communication link game. Signs 36 are communication networks, such as a public line. The controller 31 for actuation equipped with the backup memory 310 for carrying out shunting preservation of the save data is connected to game equipment 32. Similarly, the controller 33 for actuation equipped with the backup memory 330 is connected also to game equipment 34. The communications protocol in a communication network 36 uses TCP/IP suitable for an open network.

[0032] Game equipment 32 writes suitably the item which the player gained, a score, a game advance situation, etc. in RAM320 with advance of a game. The data written in RAM320 can be transmitted to a backup memory 310 as save data. Moreover, the item which the player gained can be transmitted to RAM340 of game equipment 34 through a communication network 36.

[0033] Drawing 5 is the explanatory view showing the condition of the back memory when performing a communication link game to a backup memory using the save data by which shunting preservation was carried out. Shunting preservation of the save data, such as an item, is carried out at the backup memory 310. If game equipment 23 connects with a network, the save data in a backup memory 310 will be transmitted to RAM320 of game equipment 23 (migration), and the save data in a backup memory 310 will be eliminated. For this reason, while game equipment 23 has connected with a communication network 36, the save data in a backup memory 310 are the state of the sky. In

case shunting preservation of the save data in RAM320 is carried out at a backup memory 310 at the time of game termination, save data are transmitted to a backup memory 310 from RAM320.

[0034] In the former, since save data were copied and transmitted when the save data of a backup memory 310 were transmitted to RAM320, after transmitting save data to RAM320, it was in the condition [that shunting preservation of the save data is carried out also into a backup memory 310]. For this reason, even if it is the case where a player provides other players with all the all [a part or] in save data, the save data with which others were provided can be saved at the self backup memory 310 by sampling a backup memory 310 compulsorily from the controller 31 for actuation after that.

[0035] However, according to this operation gestalt, since it is not copied to RAM320 but is moved to RAM320, the save data in a backup memory 310 can prevent the unauthorized use of the above backup memories effectively.

[0036] Gestalt 4. drawing 6 of implementation of invention is an explanatory view of a server and game equipment which controls a communication link game. In this drawing, a sign 41 is home video game equipment, and a communication link game can be performed by accessing a server 44. Game equipment 41 develops a game based on the actuation signal of the player supplied from the controller 42 for actuation. The controller 42 for actuation is equipped with the backup memory 43 for carrying out shunting preservation of the save data, and it is constituted. The backup memory 43 consists of nonvolatile memory.

[0037] The server 44 is equipped with the database 45 and is recording the count of access and access time (henceforth access information) to a network of game equipment 41 per record by using Equipment ID as a key. Equipment ID is the identification information of a proper at game equipment 41, for example, is a serial number, the time (it contains to a second unit) which game equipment 41 connected for the first time at the network. In B1011 and the count of access, in the example of this drawing, access time is [the equipment ID of game equipment 41] -- 72 times for 19:14 32 seconds on October 2, 2000, 21:25 11

seconds on October 4, 2000, and 11:07 52 seconds on October 9, 2000. The access information of game equipment 41 is registered into a database 45, and the contents also as a backup memory 43 with the same ** are written in.

[0038] In this drawing, if game equipment 41 accesses a server 44 through a communication network (this drawing (1)), a server 44 will acquire the access information in Equipment ID and a backup memory 43 from game equipment 41. Subsequently, with reference to a database 45 (this drawing (2)), it is confirmed whether Equipment ID and access information have consistency. If it takes into consideration that two or more game equipments include to a second unit, and hardly access the same time, access information will be considered to be the thing of a proper by the backup memory 43. For this reason, the access information of game equipment functions as identification information for discriminating a backup memory 43 from other backup memories.

[0039] When Equipment ID and access information are in agreement, as for a server 44, only 1 increments the count of access, and a record content is updated by carrying out additional record of the access time. Moreover, the access information of the back memory 43 is also updated to coincidence (this drawing (3)). On the other hand, since there is misgiving of an unauthorized use of a backup memory 43 when Equipment ID and access information are not in agreement, use of a backup memory 43 is restricted.

[0040] When it is going to use ** save data for others' backup memory as when Equipment ID and access information are not in agreement, having saved them, it is the case where there is misgiving of the illegal copy of ** save data. ** Since Equipment ID, the count of access, and access time of a case do not correspond at all, it turns out that it was going to use other save data which are not used for game equipment 41. ** Since it is save data used for game equipment 41, a part of access time of a case corresponds, but since the counts of access differ, it is the case where there is misgiving of an illegal copy.

[0041] ** Explain a case to a detail with reference to drawing 7 . As shown in this drawing, suppose that the save data recorded on the backup memory 43 were

copied illegally to the backup memory 46 (this drawing (1)). If the count of access currently recorded on the backup memory 43 is made into 72 times, the count of access currently recorded on the backup memory 46 will also become 72 times. Here, if a player uses a backup memory 43, the count of access currently recorded on the backup memory 43 will be updated by 73 times (this drawing (2)). Moreover, the record in a database 45 is also updated by 73 times (this drawing (3)). Here, since the count of access of a backup memory 46 differs from the count of access currently recorded on the database 45 when a player samples a backup memory 43 from a controller 42, newly equips with a backup memory 46 and accesses a server 44, it turns out that there is misgiving of an illegal copy (this drawing (4)). Moreover, it is also the same as when using the same backup memory which copies save data to another record medium beforehand, performs a game after that, updates save data, returns to the save data before updating again, and performs a game.

[0042] As mentioned above, since the server 44 has managed Equipment ID and access information of game equipment 41 unitary according to this operation gestalt as explained, the unauthorized use of a backup memory 43 and an illegal copy can be effectively prevented by collating Equipment ID and access information.

[0043] Gestalt 5. drawing 8 of implementation of invention is an explanatory view in the case of connecting two or more game equipments to a communication network, and performing a communication link game. In this drawing, signs 51-53 are game equipment linked to a communication network 54, and a sign 55 is a server which controls a communication link game. In this operation gestalt, as shown in drawing 9, according to the level of a communication link game, the level in which game participation is possible is set up. For example, although all the members' participation is possible on the Normal level, 40 or more level serves as game participating conditions with hard level very 20 or more level on hard level. Level here is a parameter given to a player character with advance of a game, and it is mainly given corresponding to the class and number of enemy

characters which pushed down into the game.

[0044] The level of each player in the case of performing the communication link game of hard level to drawing 8 is described, and since the level of the player of 30 and game equipment 53 of the level of the player of 25 and game equipment 52 is 45, the level of the player of game equipment 51 can perform the communication link game of hard level by these three persons' player.

[0045] Without asking the level of a player, when performing such a communication link game by two or more persons at the former, since it was able to participate, the beginner who just began the player and communication link game of the BE upper level which became skilled in a communication link game can do a game play together, and a beginner is following the player back of upper person level, and becomes possible [arriving to the ending of a game]. The fun of a game may be reduced by half when free participation of a communication link game is accepted without asking the height of such level. However, according to this operation gestalt, since the level of the player which can participate is set up according to the level of a communication link game, above un-arranging is cancelable.

[0046] Gestalt 6. drawing 10 of implementation of invention is the explanatory view which described the scenario of game expansion. As shown in this drawing, a game consists of each stage to a stage 1 - a stage 3. A stage consists of a scene of a forest area, an underground cave, a working, an ancient spacecraft, etc. According to advance of a game, the scene 1 and the scene 2 are set to each stage, and change is given to scene expansion. There is a last scene in each stage and it can shift to degree stage by pushing down the enemy character which appears here.

[0047] When a player carries out a game play off-line, without connecting with a communication network, that of save (preservation) ***** is common, using the advance situation of a game as flag data in preparation for a next game play. However, since two or more player characters develop a game in connecting with a communication network and carrying out a game play on-line, even if a

beginner does nothing, he can run a game only by attaching the player back of upper level.

[0048] For this reason, with this operation gestalt, as shown in drawing 11 , in performing a game on-line, it does not save (step S1; YES) and the flag data of game advance (step S2), but in not performing a game on-line, it saves (step S1; NO) and the flag data of game advance (step S3). Above un-arranging is cancelable with this configuration. Moreover, even if it is the case where game equipment saves the flag data of game advance, when performing a game without connecting with a communication network, you may constitute so that it may forbid playing from the middle of a game with reference to these flag data.

[0049] In addition, as a means to control save of the flag data of game advance in the case of a communication link game, a save control means may be prepared in a game equipment side, and you may constitute so that save of the flag data of game advance may be controlled by control of a game server.

[0050] Screen transition of the ending screen of a game is shown in gestalt 7. drawing 12 of implementation of invention. In this drawing, - (A1) (A3) is the screen transition diagram of the ending screen when carrying out a game play off-line, without a player connecting with a communication network, and ending a game. After the player character 61 pushes down the enemy character 62 and a game is completed (this drawing (A1)), an ending staff roll flows for several minutes (this drawing (A2)), and an end screen is displayed (this drawing (A3)).

[0051] On the other hand, - (B1) (B-2) is the screen transition diagram of the ending screen when two or more persons connecting with a communication network, carrying out a game play on-line, and ending a game. After the player characters 71-74 push down the enemy character 75 and a game is completed (this drawing (B1)), an end screen is displayed promptly (this drawing (B-2)), and it returns to the original game screen (this drawing (B1)).

[0052] Thus, since a telephone rate is charged as connection charge of the telephone line and also the Internet connectivity tariff to a server is charged as long as it has connected with a circuit when a player performs a communication

link game on-line, the economic burden of a player is mitigable by ending the ending screen of a game for a short time.

[0053] In addition, it may consider as a means to control the display time of the ending screen of a game short in the case of a communication link game, and this control means may be prepared in a game equipment side, and you may constitute so that the display time of an ending screen may be short controlled by control of a game server.

[0054]

[Effect of the Invention] According to the record medium which recorded the program which makes a computer system perform the security system, the record-medium management method, and this approach of this invention and in which computer reading is possible, since identification information is published by the data processor from a server through a communication network, even when identification information is not beforehand given to a data processor, which record medium is used for which data processor, and ** can be managed.

[0055] Since according to the record medium which recorded the program which makes a computer system perform the data processor, the data-processing approach, and this approach of this invention and in which computer reading is possible the save data of a backup memory can be used as a data processor, identification information of a proper can be used as a key and encryption processing and decryption processing can be carried out, it is effective for the security countermeasures of save data.

[0056] Since according to the management method of the data processor of this invention, and save data the save data memorized by the nonvolatile memory in a backup memory are eliminated after transmitting the save data by which data processing is carried out with a data processor to a data processor, the unauthorized use of save data can be prevented effectively.

[0057] Since the server has managed the count which the data processor equipped with the backup memory connected to the communication network according to the record medium which recorded the program which makes a

computer system perform the management method and this approach of the security system of this invention, and save data and in which computer reading is possible, the unauthorized use of the save data in a backup memory can be prevented effectively.

[0058] According to the game server of this invention, corresponding to the difficulty of a game, the level which can participate in a communication link game is set up beforehand, and since participation of a communication link game is permitted to the player which fills the demand level corresponding to the difficulty of a game, a communication link game can be played more interesting.

[0059] Since according to the record medium which recorded the program which makes game equipment perform the game art and this approach of this invention and in which computer reading is possible the advance situation of a game is not saved as save data when connecting with a communication network and performing a communication link game, a communication link game can be played more interesting.

[0060] Since according to the record medium which recorded the program which makes game equipment perform the game art and this approach of this invention and in which computer reading is possible display time of the ending screen of a game is shortened when connecting with a communication network and performing a communication link game, the burden of the connection charge of a communication network is mitigable.

DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]

[Drawing 1] It is the explanatory view of the security system of a record medium.

[Drawing 2] It is the explanatory view of game equipment and a controller.

[Drawing 3] It is the appearance explanatory view of game equipment and a

controller.

[Drawing 4] It is the explanatory view showing the connection configuration of game equipment and a communication network.

[Drawing 5] It is the explanatory view showing migration of save data.

[Drawing 6] It is the explanatory view of the security system of a backup memory.

[Drawing 7] It is the explanatory view of the cure against an illegal copy of a backup memory.

[Drawing 8] It is the explanatory view of a communication link game.

[Drawing 9] It is the explanatory view of the level which can be communication link game participated.

[Drawing 10] It is the explanatory view of the scenario of game expansion.

[Drawing 11] It is a flow chart about save of the flag data of game advance.

[Drawing 12] It is the explanatory view of the ending screen of a game.

[Description of Notations]

10 [-- Server,] -- CD-ROM, 11 -- Game equipment, 12 -- Nonvolatile memory, 13
14 [-- Backup memory,] -- A database, 20 -- A controller, 21 -- A control unit, 22
23 [-- CD-ROM drive,] -- Game equipment, 24 -- The game processing section,
25 -- The cipher-processing section, 26 27 [-- Controller,] -- Equipment ID
memory, 28 -- A connecting cord, 29 -- A connector, 31 32 [-- Server,] -- Game
equipment, 33 -- A controller, 34 -- Game equipment, 35 36 -- A communication
network, 310 -- A backup memory, 320 -- RAM, 330 [-- A controller, 43 / -- A
backup memory, 44 / -- A server, 45 / -- A database, 46 / -- A backup memory,
51-53 / -- Game equipment, 54 / -- A communication network, 55 / -- Server] -- A
backup memory, 340 -- RAM, 41 -- Game equipment, 42
